

<110> White, David  
Zhou, Jianghong  
Tartaglia, Louis A.

<130> 07334/109001

<141> 1998-11-19

<151> 1998-10-29

<151> 1998-09-10

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<213> Mus musculus

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 85 90 95  
 Glu Pro Asp Ser Thr Val Met Thr Ala Val Thr Asp Phe Asn Asn Leu  
 100 105 110  
 Pro Asp Arg Phe Lys Asp Phe Leu Leu Tyr Leu Arg Cys Arg Asn Tyr  
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 Val Arg Val Phe Leu Leu Gly Lys Thr Pro Pro Glu Asp Asn His Pro  
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 195 200 205  
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 Val Leu Phe Leu Arg Trp Val Ser Thr Ser Cys Pro Asp Ala Glu Phe  
 225 230 235 240  
 Val Phe Lys Gly Asp Asp Asp Val Phe Val Asn Thr His His Ile Leu  
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 Gly Asp Val Ile His Asn Ala Gly Pro His Arg Asp Lys Lys Leu Lys  
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&lt;211&gt; 365

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 4

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Lys	Leu	Asn	Arg	Trp	Tyr	Asn	Pro	Ile	Leu	Asn	Arg	Val	Ala	Asn	Gln
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Thr	Gly	Glu	Leu	Ala	Thr	Ser	Pro	Asn	Thr	Ser	His	Leu	Ser	Tyr	Cys
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Glu	Pro	Asp	Ser	Thr	Val	Met	Thr	Ala	Val	Thr	Asp	Phe	Asn	Asn	Leu
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Pro	Asp	Arg	Phe	Lys	Asp	Phe	Leu	Leu	Tyr	Leu	Arg	Cys	Arg	Asn	Tyr
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Ser	Leu	Leu	Ile	Asp	Gln	Pro	Lys	Lys	Cys	Ala	Lys	Lys	Pro	Phe	Leu
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Gly	Met	Cys	Leu	Gln	Lys	Leu	Gly	Leu	Val	Pro	Glu	Lys	His	Lys	Gly
	305				310				315					320	
Phe	Arg	Thr	Phe	Asp	Ile	Glu	Glu	Lys	Asn	Lys	Lys	Asn	Ile	Cys	Ser
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Tyr	Ile	Asp	Leu	Met	Leu	Val	His	Ser	Arg	Lys	Pro	Gln	Glu	Met	Ile
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 65 70 75 80  
 Asn Glu Glu Glu Gly Ala Ala Lys Thr Gly Val Val Glu Val Thr Met  
 85 90 95  
 Glu Arg His Pro Tyr Lys His Pro Asn Ile Pro Asn Val Val Phe Trp  
 100 105 110  
 Asp Leu Pro Gly Ile Gly Ser Thr Asn Phe Pro Pro Asn Thr Tyr Leu  
 115 120 125  
 Glu Lys Met Lys Phe Tyr Glu Tyr Asp Phe Phe Ile Ile Ile Ser Ala  
 130 135 140  
 Thr Arg Phe Lys Lys Asn Asp Ile Asp Ile Ala Lys Ala Ile Ser Met  
 145 150 155 160  
 Met Lys Lys Glu Phe Tyr Phe Val Arg Thr Lys Val Asp Ser Asp Ile  
 165 170 175  
 Thr Asn Glu Ala Asp Gly Lys Pro Gln Thr Phe Asp Lys Glu Lys Val  
 180 185 190

Leu Gln Asp Ile Arg Leu Asn Cys Val Asn Thr Phe Arg Glu Asn Gly  
 195 200 205  
 Ile Ala Glu Pro Pro Ile Phe Leu Leu Ser Asn Lys Asn Val Cys His  
 210 215 220  
 Tyr Asp Phe Pro Val Leu Met Asp Lys Leu Ile Ser Asp Leu Pro Ile  
 225 230 235 240  
 Tyr Arg Arg His Asn Phe Met Val Ser Leu Pro Asn Ile Thr Asp Ser  
 245 250 255  
 Val Ile Glu Lys Arg Gln Phe Leu Lys Gln Arg Ile Trp Leu Glu  
 260 265 270  
 Gly Phe Ala Ala Asp Leu Val Asn Ile Ile Pro Ser Leu Thr Phe Leu  
 275 280 285  
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 Thr Val Phe Gly Val Asp Glu Thr Ser Leu Gln Arg Leu Ala Arg Asp  
 305 310 315 320  
 Trp Glu Ile Glu Val Asp Gln Val Glu Ala Met Ile Lys Ser Pro Ala  
 325 330 335  
 Val Phe Lys Pro Thr Asp Glu Glu Thr Ile Gln Glu Arg Leu Ser Arg  
 340 345 350  
 Tyr Ile Gln Glu Phe Cys Leu Ala Asn Gly Tyr Leu Leu Pro Lys Asn  
 355 360 365  
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 Thr Phe Gly Asn Ile Arg Thr Arg Pro Ile Asn Pro His Ser Phe Glu  
                   50                  55                  60  
 Phe Leu Ile Asn Glu Pro Asn Lys Cys Glu Lys Asn Ile Pro Phe Leu  
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 Val Ile Leu Ile Ser Thr Thr His Lys Glu Phe Asp Ala Arg Gln Ala  
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 Ile Arg Glu Thr Trp Gly Asp Glu Asn Asn Phe Lys Gly Ile Lys Ile  
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 Ala Thr Leu Phe Leu Leu Gly Lys Asn Ala Asp Pro Val Leu Asn Gln  
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 Met Val Glu Gln Glu Ser Gln Ile Phe His Asp Ile Ile Val Glu Asp  
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 Phe Ile Asp Ser Tyr His Asn Leu Thr Leu Lys Thr Leu Met Gly Met  
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 Arg Trp Val Ala Thr Phe Cys Ser Lys Ala Lys Tyr Val Met Lys Thr  
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 Asp Ser Asp Ile Phe Val Asn Met Asp Asn Leu Ile Tyr Lys Leu Leu  
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 Tyr Ile Phe Ser Ala Asp Val Ala Glu Leu Ile Tyr Lys Thr Ser Leu  
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 His Thr Arg Leu Leu His Leu Glu Asp Val Tyr Val Gly Leu Cys Leu  
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 Arg Lys Leu Gly Ile His Pro Phe Gln Asn Ser Gly Phe Asn His Trp  
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 Lys Met Ala Tyr Ser Leu Cys Arg Tyr Arg Arg Val Ile Thr Val His  
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 Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg Gln Asp Phe Arg  
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 Phe Thr Leu Arg Glu His Ser Asn Cys Ser His Gln Asn Pro Phe Leu  
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 Val Ile Leu Val Thr Ser Arg Pro Ser Asp Val Lys Ala Arg Gln Ala  
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 Ile Arg Val Thr Trp Gly Glu Lys Lys Ser Trp Trp Gly Tyr Glu Val  
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 Arg Gln Asp Phe Leu Asp Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile  
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 Met Ala Phe Arg Trp Val Met Glu Phe Cys Pro Asn Ala Lys Tyr Ile  
 165 170 175  
 Met Lys Thr Asp Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys  
 180 185 190  
 Tyr Leu Leu Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro  
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 225 230 235 240  
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 245 250 255  
 Met Ser His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val Gly Ile  
 260 265 270  
 Cys Leu Asn Leu Leu Lys Val Asp Ile His Ile Pro Glu Asp Thr Asn  
 275 280 285  
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 <213> Drosophilea melonogaster

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 Glu Leu Asn Phe Glu Arg His Phe His Tyr Pro Leu Asn Asp Asp Thr  
 35 40 45  
 Gly Ser Gly Ser Ala Ser Ser Gly Leu Asp Lys Phe Ala Tyr Leu Arg  
 50 55 60  
 Val Pro Ser Phe Thr Ala Glu Val Pro Val Asp Gln Pro Ala Arg Leu  
 65 70 75 80  
 Thr Met Leu Ile Lys Ser Ala Val Gly Asn Ser Arg Arg Arg Glu Ala  
 85 90 95  
 Ile Arg Arg Thr Trp Gly Tyr Glu Gly Arg Phe Ser Asp Val His Leu  
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 Ala Ser Glu Gln Phe Asn Arg Ser Glu Phe Tyr Leu Phe Val Asp Asp  
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 Asp Tyr Tyr Val Ser Ala Lys Asn Val Leu Lys Phe Leu Gly Arg Gly  
 180 185 190  
 Arg Gln Ser His Gln Pro Glu Leu Leu Phe Ala Gly His Val Phe Gln  
 195 200 205

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Thr Ser Pro Leu Arg His Lys Phe Ser Lys Trp Tyr Val Ser Leu Glu
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Ile Leu Ser Gln Lys Ala Leu Arg Gln Leu Tyr Ala Ala Ser Val His
  245      250      255
Leu Pro Leu Phe Arg Phe Asp Asp Val Tyr Leu Gly Ile Val Ala Leu
  260      265      270
Lys Ala Gly Ile Ser Leu Gln His Cys Asp Asp Phe Arg Phe His Arg
  275      280      285
Pro Ala Tyr Lys Gly Pro Asp Ser Tyr Ser Ser Val Ile Ala Ser His
  290      295      300
Glu Phe Gly Asp Pro Glu Glu Met Thr Arg Val Trp Asn Glu Cys Arg
305      310      315      320
Ser Ala Asn Tyr Ala
      325

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<210> 11
<211> 422
<212> PRT
<213> Homo sapien

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<400> 11
Met Leu Gln Trp Arg Arg Arg His Cys Cys Phe Ala Lys Met Thr Trp
  1      5      10      15
Asn Ala Lys Arg Ser Leu Phe Arg Thr His Leu Ile Gly Val Leu Ser
      20      25      30
Leu Val Phe Leu Phe Ala Met Phe Leu Phe Phe Asn His His Asp Trp
  35      40      45
Leu Pro Gly Arg Ala Gly Phe Lys Glu Asn Pro Val Thr Tyr Thr Phe
  50      55      60
Arg Gly Phe Arg Ser Thr Lys Ser Glu Thr Asn His Ser Ser Leu Arg
  65      70      75      80
Asn Ile Trp Lys Glu Thr Val Pro Gln Thr Leu Arg Pro Gln Thr Ala
      85      90      95
Thr Asn Ser Asn Asn Thr Asp Leu Ser Pro Gln Gly Val Thr Gly Leu
      100      105      110
Glu Asn Thr Leu Ser Ala Asn Gly Ser Ile Tyr Asn Glu Lys Gly Thr
      115      120      125
Gly His Pro Asn Ser Tyr His Phe Lys Tyr Ile Ile Asn Glu Pro Glu
      130      135      140
Lys Cys Gln Glu Lys Ser Pro Phe Leu Ile Leu Leu Ile Ala Ala Glu
      145      150      155      160
Pro Gly Gln Ile Glu Ala Arg Arg Ala Ile Arg Gln Thr Trp Gly Asn
      165      170      175
Glu Ser Leu Ala Pro Gly Ile Gln Ile Thr Arg Ile Phe Leu Leu Gly
      180      185      190
Leu Ser Ile Lys Leu Asn Gly Tyr Leu Gln Arg Ala Ile Leu Glu Glu
      195      200      205
Ser Arg Gln Tyr His Asp Ile Ile Gln Gln Glu Tyr Leu Asp Thr Tyr
      210      215      220
Tyr Asn Leu Thr Ile Lys Thr Leu Met Gly Met Asn Trp Val Ala Thr
      225      230      235      240
Tyr Cys Pro His Ile Pro Tyr Val Met Lys Thr Asp Ser Asp Met Phe
      245      250      255
Val Asn Thr Glu Tyr Leu Ile Asn Lys Leu Leu Lys Pro Asp Leu Pro
      260      265      270
Pro Arg His Asn Tyr Phe Thr Gly Tyr Leu Met Arg Gly Tyr Ala Pro
      275      280      285
Asn Arg Asn Lys Asp Ser Lys Trp Tyr Met Pro Pro Asp Leu Tyr Pro
      290      295      300

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9/14

Ser	Glu	Arg	Tyr	Pro	Val	Phe	Cys	Ser	Gly	Thr	Gly	Tyr	Val	Phe	Ser
305					310					315					320
Gly	Asp	Leu	Ala	Glu	Lys	Ile	Phe	Lys	Val	Ser	Leu	Gly	Ile	Arg	Arg
				325					330					335	
Leu	His	Leu	Glu	Asp	Val	Tyr	Val	Gly	Ile	Cys	Leu	Ala	Lys	Leu	Arg
			340					345					350		
Ile	Asp	Pro	Val	Pro	Pro	Pro	Asn	Glu	Phe	Val	Phe	Asn	His	Trp	Arg
	355						360					365			
Val	Ser	Tyr	Ser	Ser	Cys	Lys	Tyr	Ser	His	Leu	Ile	Thr	Ser	His	Gln
	370					375					380				
Phe	Gln	Pro	Ser	Glu	Leu	Ile	Lys	Tyr	Trp	Asn	His	Leu	Gln	Gln	Asn
385					390					395					400
Lys	His	Asn	Ala	Cys	Ala	Asn	Ala	Ala	Lys	Glu	Lys	Ala	Gly	Arg	Tyr
				405					410					415	
Arg	His	Arg	Lys	Leu	His										
			420												

<210> 12  
 <211> 229  
 <212> PRT  
 <213> Artificial sequence

<220>  
 <221> VARIANT  
 <222> (1)...(229)  
 <223> Xaa = Any Amino Acid

Met	Ala	Xaa	Arg	Arg	Lys	Val	Leu	Leu	Arg	Leu	Leu	Val	Leu	Ser	Leu
1				5					10					15	
Val	Xaa	Leu	Xaa	Xaa	Xaa	Phe	Xaa	Phe	Leu	Xaa	His	Trp	Phe	Phe	Pro
			20					25					30		
Ile	Trp	Tyr	Leu	Ser	Ile	Pro	Leu	Arg	Pro	Gln	Thr	Gly	Ser	Xaa	Ser
		35					40					45			
Xaa	Ser	Xaa	Xaa	Leu	Ser	His	Leu	Tyr	Asn	Thr	Val	Xaa	Arg	Xaa	Asn
	50					55					60				
Xaa	Xaa	Phe	Asn	Asn	Xaa	Xaa	Thr	Arg	Pro	Ile	Asn	Ser	Xaa	Xaa	Phe
65				70						75					80
Glu	Phe	Leu	Ile	Asp	Glu	Pro	Xaa	Lys	Cys	Xaa	Lys	Lys	Pro	Phe	Leu
				85					90					95	
Val	Leu	Leu	Ile	Lys	Ser	Xaa	Pro	Gly	Xaa	Phe	Xaa	Ala	Arg	Gln	Ala
			100					105					110		
Ile	Arg	Glu	Thr	Trp	Gly	Xaa	Glu	Xaa	Asn	Phe	Xaa	Gly	Ile	Xaa	Val
		115					120					125			
Xaa	Arg	Val	Phe	Leu	Leu	Gly	Lys	Xaa	Ala	Glu	Xaa	Xaa	Asp	Pro	Xaa
	130					135					140				
Leu	Xaa	Xaa	Met	Val	Glu	Xaa	Glu	Ser	Arg	Xaa	His	Gly	Asp	Ile	Ile
145				150					155						160
Gln	Gln	Asp	Phe	Leu	Asp	Thr	Tyr	Phe	Asn	Leu	Thr	Leu	Lys	Thr	Leu
				165					170					175	
Met	Gly	Met	Arg	Trp	Val	Ala	Thr	Phe	Cys	Pro	Xaa	Ala	Glu	Tyr	Val
			180					185					190		
Met	Lys	Thr	Asp	Ser	Asp	Val	Phe	Val	Asn	Thr	Xaa	Asn	Leu	Leu	Asn
		195					200					205			
Lys	Leu	Leu	Lys	Pro	Ser	Leu	Ser	His	Arg	Xaa	Xaa	Leu	Phe	Thr	Gly
	210					215					220				
Tyr	Val	Ile	Xaa	Gly											
225															

<210> 13  
 <211> 1707  
 <212> DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (246)...(1436)

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(1707)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 13

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acgcgtccgc gcagcggcag cggcagcagc ggcaacaagt gccggaggct agcagagcca      60
agccggagca gtccctgccg ccgacaccgc cgggcccgcc gtccggggcg ccgcgcatgg      120
agcgtgagct gcggcggtcg ccgggctgag ccgcgcggag cggccgggac gtggatgtgg      180
ccgcgatctc ccgcccttgc ccccgccccg ccgagctgga gctgctcccg gacaagatat      240
gagaa atg agt gtt gga cgt cga aga ata aag ttg ttg ggt atc ctg atg      290
Met Ser Val Gly Arg Arg Arg Ile Lys Leu Leu Gly Ile Leu Met
      1           5           10           15

atg gca aat gtc ttc att tat ttt att atg gaa gtc tcc aaa agc agt      338
Met Ala Asn Val Phe Ile Tyr Phe Ile Met Glu Val Ser Lys Ser Ser
      20           25           30

agc caa gaa aaa aat gga aaa ggg gaa gta ata ata ccc aaa gag aag      386
Ser Gln Glu Lys Asn Gly Lys Gly Glu Val Ile Ile Pro Lys Glu Lys
      35           40           45

ttc tgg aag ata tct acc cct ccc gag gca tac tgg aac cga gag caa      434
Phe Trp Lys Ile Ser Thr Pro Pro Glu Ala Tyr Trp Asn Arg Glu Gln
      50           55           60

gag aag ctg aac cgg cag tac aac ccc atc ctg agc atg ctg acc aac      482
Glu Lys Leu Asn Arg Gln Tyr Asn Pro Ile Leu Ser Met Leu Thr Asn
      65           70           75

cag acg ggg gag gcg ggc agg ctc tcc aat ata agc cat ctg aac tac      530
Gln Thr Gly Glu Ala Gly Arg Leu Ser Asn Ile Ser His Leu Asn Tyr
      80           85           90

tgc gaa cct gac ctg agg gtc acg tcg gtg gtt acg ggt ttt aac aac      578
Cys Glu Pro Asp Leu Arg Val Thr Ser Val Val Thr Gly Phe Asn Asn
      100          105          110

ttg ccg gac aga ttt aaa gac ttt ctg ctg tat ttg aga tgc cgc aat      626
Leu Pro Asp Arg Phe Lys Asp Phe Leu Leu Tyr Leu Arg Cys Arg Asn
      115          120          125

tat tca ctg ctt ata gat cag ccg gat aag tgt gca aag aaa cct ttc      674
Tyr Ser Leu Leu Ile Asp Gln Pro Asp Lys Cys Ala Lys Lys Pro Phe
      130          135          140

ttg ttg ctg gcg att aag tcc ctc act cca cat ttt gcc aga agg caa      722
Leu Leu Leu Ala Ile Lys Ser Leu Thr Pro His Phe Ala Arg Arg Gln
      145          150          155

gca atc cgg gaa tcc tgg ggc caa gaa agc aac gca ggg aac caa acg      770
Ala Ile Arg Glu Ser Trp Gly Gln Glu Ser Asn Ala Gly Asn Gln Thr
      160          165          170

gtg gtg cga gtc ttc ctg ctg ggc cag aca ccc cca gag gac aac cac      818
Val Val Arg Val Phe Leu Leu Gly Gln Thr Pro Pro Glu Asp Asn His
      180          185          190

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ccc gac ctt tca gat atg ctg aaa ttt gag agt gag aag cac caa gac Pro Asp Leu Ser Asp Met Leu Lys Phe Glu Ser Glu Lys His Gln Asp 195 200 205	866
att ctt atg tgg aac tac aga gac act ttc ttc aac ttg tct ctg aag Ile Leu Met Trp Asn Tyr Arg Asp Thr Phe Phe Asn Leu Ser Leu Lys 210 215 220	914
gaa gtg ctg ttt ctc agg tgg gta agt act tcc tgc cca gac act gag Glu Val Leu Phe Leu Arg Trp Val Ser Thr Ser Cys Pro Asp Thr Glu 225 230 235	962
ttt gtt ttc aag ggc gat gac gat gtt ttt gtg aac acc cat cac atc Phe Val Phe Lys Gly Asp Asp Asp Val Phe Val Asn Thr His His Ile 240 245 250 255	1010
ctg aat tac ttg aat agt tta tcc aag acc aaa gcc aaa gat ctc ttc Leu Asn Tyr Leu Asn Ser Leu Ser Lys Thr Lys Ala Lys Asp Leu Phe 260 265 270	1058
ata ggt gat gtg atc cac aat gct gga cct cat cgg gat aag aag ctg Ile Gly Asp Val Ile His Asn Ala Gly Pro His Arg Asp Lys Lys Leu 275 280 285	1106
aag tac tac atc cca gaa gtt gtt tac tct ggc ctc tac cca ccc tat Lys Tyr Tyr Ile Pro Glu Val Val Tyr Ser Gly Leu Tyr Pro Pro Tyr 290 295 300	1154
gca ggg gga ggg ggg ttc ctc tac tcc ggc cac ctg gcc ctg agg ctg Ala Gly Gly Gly Gly Phe Leu Tyr Ser Gly His Leu Ala Leu Arg Leu 305 310 315	1202
tac cat atc act gac cag gtc cat ctc tac ccc att gat gac gtt tat Tyr His Ile Thr Asp Gln Val His Leu Tyr Pro Ile Asp Asp Val Tyr 320 325 330 335	1250
act gga atg tgc ctt cag aaa ctc ggc ctc gtt cca gag aaa cac aaa Thr Gly Met Cys Leu Gln Lys Leu Gly Leu Val Pro Glu Lys His Lys 340 345 350	1298
ggc ttc agg aca ttt gat atc gag gag aaa aac aaa aat aac atc tgc Gly Phe Arg Thr Phe Asp Ile Glu Glu Lys Asn Lys Asn Asn Ile Cys 355 360 365	1346
tcc tat gta gat ctg atg tta gta cat agt aga aaa cct caa gag atg Ser Tyr Val Asp Leu Met Leu Val His Ser Arg Lys Pro Gln Glu Met 370 375 380	1394
att gat att tgg tct cag ttg cag agt gct cat tta aaa tgc Ile Asp Ile Trp Ser Gln Leu Gln Ser Ala His Leu Lys Cys 385 390 395	1436
taaaatagat acaaactcaa tttkgsatwg raaggggtwt tttgratwgg ycccatgttg gggtctcaca ttagagtaat ttctatttna ancatgaaat tgcctttatg agtgataccc atttanggcc tctaancctt catttgnact cacgtgaaga agggaaagcg ggagaaggta attnttttat ggtgaatggc aggatattgg tctgacttac cgntagggga ntttaaaact ggnccttttt gaatctgttt ggaatggccct t	1496 1556 1616 1676 1707

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 14

Met	Ser	Val	Gly	Arg	Arg	Arg	Ile	Lys	Leu	Leu	Gly	Ile	Leu	Met	Met
1				5					10					15	
Ala	Asn	Val	Phe	Ile	Tyr	Phe	Ile	Met	Glu	Val	Ser	Lys	Ser	Ser	Ser
			20					25					30		
Gln	Glu	Lys	Asn	Gly	Lys	Gly	Glu	Val	Ile	Ile	Pro	Lys	Glu	Lys	Phe
		35					40					45			
Trp	Lys	Ile	Ser	Thr	Pro	Pro	Glu	Ala	Tyr	Trp	Asn	Arg	Glu	Gln	Glu
	50					55					60				
Lys	Leu	Asn	Arg	Gln	Tyr	Asn	Pro	Ile	Leu	Ser	Met	Leu	Thr	Asn	Gln
	65				70					75					80
Thr	Gly	Glu	Ala	Gly	Arg	Leu	Ser	Asn	Ile	Ser	His	Leu	Asn	Tyr	Cys
				85					90					95	
Glu	Pro	Asp	Leu	Arg	Val	Thr	Ser	Val	Val	Thr	Gly	Phe	Asn	Asn	Leu
			100					105					110		
Pro	Asp	Arg	Phe	Lys	Asp	Phe	Leu	Leu	Tyr	Leu	Arg	Cys	Arg	Asn	Tyr
		115					120					125			
Ser	Leu	Leu	Ile	Asp	Gln	Pro	Asp	Lys	Cys	Ala	Lys	Lys	Pro	Phe	Leu
	130					135					140				
Leu	Leu	Ala	Ile	Lys	Ser	Leu	Thr	Pro	His	Phe	Ala	Arg	Arg	Gln	Ala
	145					150				155					160
Ile	Arg	Glu	Ser	Trp	Gly	Gln	Glu	Ser	Asn	Ala	Gly	Asn	Gln	Thr	Val
				165					170					175	
Val	Arg	Val	Phe	Leu	Leu	Gly	Gln	Thr	Pro	Pro	Glu	Asp	Asn	His	Pro
			180					185					190		
Asp	Leu	Ser	Asp	Met	Leu	Lys	Phe	Glu	Ser	Glu	Lys	His	Gln	Asp	Ile
		195					200					205			
Leu	Met	Trp	Asn	Tyr	Arg	Asp	Thr	Phe	Phe	Asn	Leu	Ser	Leu	Lys	Glu
	210					215					220				
Val	Leu	Phe	Leu	Arg	Trp	Val	Ser	Thr	Ser	Cys	Pro	Asp	Thr	Glu	Phe
	225				230					235					240
Val	Phe	Lys	Gly	Asp	Asp	Val	Phe	Val	Asn	Thr	His	His	Ile	Leu	
				245				250					255		
Asn	Tyr	Leu	Asn	Ser	Leu	Ser	Lys	Thr	Lys	Ala	Lys	Asp	Leu	Phe	Ile
			260					265					270		
Gly	Asp	Val	Ile	His	Asn	Ala	Gly	Pro	His	Arg	Asp	Lys	Lys	Leu	Lys
		275					280					285			
Tyr	Tyr	Ile	Pro	Glu	Val	Val	Tyr	Ser	Gly	Leu	Tyr	Pro	Pro	Tyr	Ala
	290					295					300				
Gly	Gly	Gly	Gly	Phe	Leu	Tyr	Ser	Gly	His	Leu	Ala	Leu	Arg	Leu	Tyr
	305				310					315					320
His	Ile	Thr	Asp	Gln	Val	His	Leu	Tyr	Pro	Ile	Asp	Asp	Val	Tyr	Thr
				325					330					335	
Gly	Met	Cys	Leu	Gln	Lys	Leu	Gly	Leu	Val	Pro	Glu	Lys	His	Lys	Gly
			340					345					350		
Phe	Arg	Thr	Phe	Asp	Ile	Glu	Glu	Lys	Asn	Lys	Asn	Asn	Ile	Cys	Ser
			355				360					365			
Tyr	Val	Asp	Leu	Met	Leu	Val	His	Ser	Arg	Lys	Pro	Gln	Glu	Met	Ile
	370					375					380				
Asp	Ile	Trp	Ser	Gln	Leu	Gln	Ser	Ala	His	Leu	Lys	Cys			
	385				390					395					

&lt;210&gt; 15

&lt;211&gt; 365

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

<400> 15  
 Gln Glu Lys Asn Gly Lys Gly Glu Val Ile Ile Pro Lys Glu Lys Phe  
 1 5 10 15  
 Trp Lys Ile Ser Thr Pro Pro Glu Ala Tyr Trp Asn Arg Glu Gln Glu  
 20 25 30  
 Lys Leu Asn Arg Gln Tyr Asn Pro Ile Leu Ser Met Leu Thr Asn Gln  
 35 40 45  
 Thr Gly Glu Ala Gly Arg Leu Ser Asn Ile Ser His Leu Asn Tyr Cys  
 50 55 60  
 Glu Pro Asp Leu Arg Val Thr Ser Val Val Thr Gly Phe Asn Asn Leu  
 65 70 75 80  
 Pro Asp Arg Phe Lys Asp Phe Leu Leu Tyr Leu Arg Cys Arg Asn Tyr  
 85 90 95  
 Ser Leu Leu Ile Asp Gln Pro Asp Lys Cys Ala Lys Lys Pro Phe Leu  
 100 105 110  
 Leu Leu Ala Ile Lys Ser Leu Thr Pro His Phe Ala Arg Arg Gln Ala  
 115 120 125  
 Ile Arg Glu Ser Trp Gly Gln Glu Ser Asn Ala Gly Asn Gln Thr Val  
 130 135 140  
 Val Arg Val Phe Leu Leu Gly Gln Thr Pro Pro Glu Asp Asn His Pro  
 145 150 155 160  
 Asp Leu Ser Asp Met Leu Lys Phe Glu Ser Glu Lys His Gln Asp Ile  
 165 170 175  
 Leu Met Trp Asn Tyr Arg Asp Thr Phe Phe Asn Leu Ser Leu Lys Glu  
 180 185 190  
 Val Leu Phe Leu Arg Trp Val Ser Thr Ser Cys Pro Asp Thr Glu Phe  
 195 200 205  
 Val Phe Lys Gly Asp Asp Asp Val Phe Val Asn Thr His His Ile Leu  
 210 215 220  
 Asn Tyr Leu Asn Ser Leu Ser Lys Thr Lys Ala Lys Asp Leu Phe Ile  
 225 230 235 240  
 Gly Asp Val Ile His Asn Ala Gly Pro His Arg Asp Lys Lys Leu Lys  
 245 250 255  
 Tyr Tyr Ile Pro Glu Val Val Tyr Ser Gly Leu Tyr Pro Pro Tyr Ala  
 260 265 270  
 Gly Gly Gly Gly Phe Leu Tyr Ser Gly His Leu Ala Leu Arg Leu Tyr  
 275 280 285  
 His Ile Thr Asp Gln Val His Leu Tyr Pro Ile Asp Asp Val Tyr Thr  
 290 295 300  
 Gly Met Cys Leu Gln Lys Leu Gly Leu Val Pro Glu Lys His Lys Gly  
 305 310 315 320  
 Phe Arg Thr Phe Asp Ile Glu Glu Lys Asn Lys Asn Asn Ile Cys Ser  
 325 330 335  
 Tyr Val Asp Leu Met Leu Val His Ser Arg Lys Pro Gln Glu Met Ile  
 340 345 350  
 Asp Ile Trp Ser Gln Leu Gln Ser Ala His Leu Lys Cys  
 355 360 365

<210> 16

<211> 20

<212> DNA

<213> Homo sapiens

<220>

<221> Artificial sequence

<222> (1)...(20)

<223> Synthetically generated primer

<400> 16

cttcgacgcc ccacactcat

<210> 17  
<211> 20  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Artificial sequence  
<222> (1)...(20)  
<223> Synthetically generated primer

<400> 17  
atgagtgtgg ggcgtcgaag

20

Sub  
C1  
cont